

REMARKS

The specification on page 18 has been amended to correct the description of the method of the measurement of the area contraction ratio of separator in the examples. A person of ordinary skill in the art would recognize that the area contraction ratio is calculated by the formula on page 18 as corrected in view of the description of the area contraction ratio on page 5, lines 13 to 16, of the specification of the present application.

Claims 1 and 5 have been amended to recite that the separator is at least partially made of polypropylene or polyethylene. This amendment is supported by the description on page 5, lines 20 to 23 of the specification. As described on page 5, lines 20-23, the shut-down function of the separator of the present invention is caused by thermal contraction of polypropylene or polyethylene of the separator.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The Office's reason for the rejection is that the specification does not disclose materials for the separator of the claimed non-aqueous electrolyte battery that have the claimed shut-down temperature, area contraction ratio and difference between the film-breaking temperature and the shut-down temperature.

The issue raised by this rejection is whether a person of ordinary skill in the art, from a reading of the specification and the knowledge of the person of ordinary skill in the art, could practice the invention without undue experimentation. It is not necessary that the specification disclose specific materials for the separator or disclose how to prepare separators having the recited properties if suitable separators can be obtained for use in the invention without undue experimentation.

The material of the separator is now recited in the claims. Therefore, the only issue is whether a person of ordinary skill in the art, could obtain separators having the recited properties without undue experimentation.

In this regard, it is noted that the area contraction ratio recited in claim 1 of the present application is defined on page 5, lines 13 to 16, of the specification of the present application. A method for measuring the area contraction ratio is described on page 18, lines 14 to 25, of the specification (as amended in the present paper).

The shut-down temperature of 162°C or less recited in claims 1 and 5 can be measured at a temperature-rising rate of 2°C/ min. by the method described on page 31, line 10, to page 32, line 19, of the specification. (The temperature-rising rate is not recited

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in claim 1 because if a shut-down temperature measured at a temperature-rising rate of 2°C/ min. is 162°C or less, a shut-down temperature measured at any rate will be 162°C or less).

The film-breaking temperature and the shut-down temperature at 15°C/min. recited in claim 5 can be measured by the method described on page 31, line 10, to page 32, line 19, of the specification of the present application.

In view of the guidance provided by the specification of the present application for measuring and determining the area contraction ratio, the shut-down temperature and the film-breaking temperature of a separator and considering the amendment to claims 1 and 5 to recite that the separator is at least partially made of polypropylene or polyethylene, applicants respectfully submit that a person of ordinary skill in the art would be able to obtain a separator, for example, a commercially available separator at least partially made of polypropylene or polyethylene, which satisfies the properties of the claims of the present application, without undue experimentation.

Removal of the 35 U.S.C. 112, first paragraph, rejection of the claims is believed to be in order and is respectfully requested.

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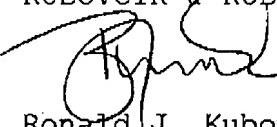
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The foregoing is believed to be a complete and proper response to the Office Action dated June 4, 2007. If, however, issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,
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